

ABSTRACT OF THE DISCLOSURE

A gas inflation/evacuation system and sealing system for use with occlusive devices such as occlusive balloons in vascular procedures. The gas inflation/evacuation system is 5 removably connectible to a proximal portion of a guidewire assembly and includes an evacuation system to evacuate the guidewire assembly and an inflation system for introducing a biocompatible gas under pressure into the guidewire assembly to inflate an occlusive device a plurality of times. A 10 sealing system is also removably connectible to the proximal portion of the guidewire assembly and selectively seals an extended sealable section at the proximal portion of the guidewire assembly at one of a plurality of separate locations to form an airtight seal of the guidewire assembly. Each time 15 a deflation of the occlusive device is desired in order to reestablish blood flow to the vessel downstream of the occlusive device, the extended sealable section at the proximal portion of the guidewire assembly preferably is cut distal to the location of the last seal to quickly deflate the 20 occlusive device.

**GAS INFLATION/EVACUATION SYSTEM AND SEALING  
SYSTEM FOR GUIDEWIRE ASSEMBLY HAVING OCCLUSIVE DEVICE**

**PARTS LIST**

20	guidewire occlusion system	56	protective polymer coating
22	guidewire assembly	60 60a	sealing system sealing system
24	proximal portion	62	first aperture
26	distal portion	64	second aperture
28	extended sealable section	66 66a	crimping mechanism crimping mechanism
30	main body portion		
32	occlusive balloon	68 68a	sealing mechanism sealing mechanism
34	lumen	70	passageway
35	channel or hole	72	handle
36	proximal end	74	pivotal cam arrangement
38	flexible tip		
40	distal end	76	roller
42	tapered portion	78	roller
44	laser weld	80	gas inflation/ evacuation system
46	Ni-Ti or stainless steel sleeve	80a-f	gas inflation/ evacuation systems
48	laser weld	82	conduit
50	crimp	84	valve arrangement
52	proximal tip coil	86	evacuation syringe
54	distal tip coil		

88	inflation syringe	122	conduit
90	pressure gauge	126	crimp body
92	evacuation syringe plunger	128	handle return
94	inflation syringe plunger	132	sealing body
96	assembly body	138	port
98	inflation syringe plunger	139	interconnect fitting
98a-c	inflation syringe plungers	140	hose
100	evacuation syringe plunger	141	coupling
102	support structure	142	inflation manifold
104	fingergrip bore	143	tee connector
106	fingergrip	144a-c	check valves
108	valve arrangement	145	coupling
110a-c	interconnect fittings	146	connector
111	one-way check valve	150	common housing
112	evacuation syringe	151	top housing half
113	one-way check valve	152	structure
114	inflation syringe	153	bottom housing half
114a-c	inflation syringes	154	fingergrip
118	assembly body	156	knob
120	knob	158	sealant material
		160	conduit aperture
		162	plugging mechanism

164 sealant  
confinement layer

166 operational  
O-ring

168 sealant O-ring

170 sealed chamber

171 venting duct

173 sealed handling  
port

174 biocompatible  
packaging

175 atmosphere  
control system